

## CLAIMS

1. A transmission apparatus that transmits a frequency division multiplexed transmission signal based on reception quality information indicating reception  
5 quality of a communicating party, the transmission apparatus comprising:

a determining section that determines a modulation and coding scheme parameter per frequency;

10 a detection section that detects a peak of a transmission signal;

a generation section that generates a waveform with an inverse characteristic of a waveform of the peak;

15 a combination section that combines the waveform of the transmission signal and the waveform with the inverse characteristic at a frequency corresponding to a modulation and coding scheme parameter having a largest difference between a measurement value indicating the reception quality of the communicating party and a unique lower limit value for the reception quality among the  
20 modulation and coding scheme parameters determined for respective frequencies; and

a transmission section that transmits the transmission signal combined with the waveform with the inverse characteristic.

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2. The transmission apparatus according to claim 1, further comprising a selection section that selects

frequencies in descending order of the difference of corresponding modulation and coding scheme parameters every time the peak is detected,

wherein the combination section combines the  
5 waveform of the transmission signal and the waveform with the inverse characteristic at selected frequencies.

3. The transmission apparatus according to claim 1,  
wherein the detection section detects the peak in the  
10 transmission signal combined with the waveform with the inverse characteristic,

further comprising a selection section that, when no peak is detected in the transmission signal combined with the waveform with the inverse characteristic,  
15 selects remaining frequencies after frequencies are removed from the frequencies in a communication band in ascending order of the difference of corresponding modulation and coding scheme parameters, and

wherein the combination section combines the  
20 waveform of the transmission signal and the waveform with the inverse characteristic at the remaining frequencies.

4. The transmission apparatus according to claim 3,  
wherein the selection section repeats the processing of  
25 removing frequencies from the frequencies in the communication band in ascending order of the difference of corresponding modulation and coding scheme parameters

a predetermined number of times at a maximum.

5. The transmission apparatus according to claim 1,  
wherein the combination section combines the waveform  
5 of the transmission signal and the waveform with the  
inverse characteristic on a frequency axis.

6. The transmission apparatus according to claim 1,  
further comprising an inverse orthogonal transform  
10 section that performs an inverse orthogonal transform  
on the transmission signal,

wherein the combination section combines the  
transmission signal subjected to the inverse orthogonal  
transform and the waveform with the inverse  
15 characteristic.

7. A peak suppression method for suppressing a peak  
in a frequency division multiplexed transmission signal  
based on reception quality information indicating  
20 reception quality of a communicating party, the method  
comprising the steps of:

determining a modulation and coding scheme parameter  
per frequency;

detecting a peak of a transmission signal;

25 generating a waveform with an inverse characteristic  
of a waveform of the peak; and

combining the waveform of the transmission signal

and the waveform with the inverse characteristic at a frequency which corresponds to a modulation and coding scheme parameter having a largest difference between a measurement value indicating the reception quality of  
5 the communicating party and a unique lower limit value for the reception quality among the modulation and coding scheme parameters determined for respective frequencies.